

DECISION NOTICE

Bison Hunting

An Environmental Assessment (EA) was prepared to review the impacts associated with a proposed bison hunt. This decision notice summarizes the proposal, the issues raised by the public review of the draft EA and the Montana Fish, Wildlife and Parks (MFWP) response, and the final decision.

Proposal

SB395 was submitted to the 2003 Montana Legislature to give Montana residents the opportunity to harvest bison that migrate from YNP. The bill passed, and a statute (MCA 87-2-730) consistent with earlier statutes related to management of wild bison in Montana (see MCA 81-2-120) was drafted that authorized MFWP to explore the potential for developing a hunting season for bison that: 1) does not interfere with management efforts by YNP, MDOL, or MFWP personnel; 2) is compatible with accepted land uses on public and private lands; and 3) can be conducted under ethical hunting conditions (i.e. fair chase). MCA 81-2-120 requires MDOL and MFWP authorization for a bison hunt and requires that both agencies cooperate in developing rules for such a hunt. Any hunt configuration approved would have to minimize bad publicity such as that generated by the public hunt authorized by the 1985 Montana Legislature and rescinded by the 1991 Montana Legislature. The hunt would not be the primary mechanism for controlling the Yellowstone bison population unless and until the brucellosis issue has been resolved and substantial numbers of bison are allowed to reside outside YNP, but it would allow a limited number of hunters the opportunity to harvest a native species that was a historically important source of protein.

A Draft EA that assessed the impacts of four bison hunting alternatives was offered for public review in June 2004. The four alternatives considered in the Draft EA were:

- 1. No action** (no public hunt; bison control carried out only by MDOL, MFWP, and YNP personnel).
- 2. Hunting by permit only in areas where bison are tolerated outside YNP with the permit valid for the entire season** (1-25 permits issued via lottery for a season extending from November 15 to February 15 valid only on public and private [with landowner permission] lands specifically defined as areas where bison are seasonally tolerated outside the northern and western boundaries of Yellowstone National Park in the Interagency Bison Management Plan (State of Montana and Yellowstone National Park, 2000a, 2000b).

3. **Hunting by permit in all areas outside YNP where bison from Yellowstone may be found with the permit valid for the entire season (Preferred Alternative)** (1-25 permits issued via lottery for a season extending from November 15 to February 15 valid on public and private [with landowner permission] lands in Hunting Districts 310, 313, 314, 361, and 362 where bison from the Yellowstone population may be found outside YNP).
4. **Hunting by permit in all areas outside YNP where bison from Yellowstone may be found with permits valid for 10-day periods within a 90-day season** (1-25 permits per 10-day periods between November 15 to February 15 on public and private [with landowner permission] lands in Hunting Districts 310, 313, 314, 361, and 362 where bison from the Yellowstone population may be found outside YNP. This would create 9 hunting periods and would allow 9 (1 permit per period) to 225 (25 permits per period) hunters to pursue bison in each hunting season.)

Public Process and Comment

The EA was offered for public review on June 7, 2004 and comments could be submitted through July 9, 2004. In addition, comments were also accepted at public meetings in Bozeman on June 21, in Butte on June 23 and in West Yellowstone on July 1.

The Draft EA drew 891 valid written responses, including e-mails and letters from individuals (870) and organizations (21). Sixty-nine individuals signed 13 petitions requesting consideration of a different alternative than those included in the Draft EA, a “citizen’s alternative.” Multiple documents by the same individuals or organizations were only included once in these totals, and mail that did not include opinions on the bison hunt (those requesting information but not expressing opinions on the hunt and messages on topics unrelated to bison hunting) were not included in totals. Comments received during the scoping process were approximately evenly split between those favoring and those opposed to a bison hunt. The majority of responses to the Draft EA opposed a public hunt, at least at this time and under conditions described in the Draft EA. The “citizen’s alternative” was the only new issue identified in comments we received in response to the Draft EA.

The following specific comments were raised in public review of the Draft EA and after each comment is the FWP/DOL response:

ISSUES AND RESPONSES

1. Potential impacts of hunting on bison population size/survival:

Some respondents perceived hunting as a threat to the survival of Yellowstone bison while other respondents viewed it as a justifiable means of limiting the population to an appropriate size. Some opponents of hunting were unwilling to acknowledge that the

uncontrolled market hunting of the 19th century could have different impacts on animal populations than the tightly controlled public hunts held on big game species today. Views on an appropriate population size for the Yellowstone herd varied from infinite (no control justified or unlimited population growth until bison repopulated the West were viewed as desirable) to limiting numbers to those that could survive within the boundaries of YNP without damaging plant communities in YNP. Several comments indicated that studies were needed to determine exactly what constitutes a sustainable population.

RESPONSE: *Population trend is determined by the relationship between natality, immigration, mortality, and emigration. Bison immigration has not been a factor for YNP since 1902. Emigration has been curtailed due to intolerance of bison on lands surrounding YNP. Predation by wolves and grizzly bears has been documented but does not, to date, constitute a major mortality source (D. Smith, personal communication). Most bison mortality in YNP herds over the past 25 years is directly attributable to humans.*

Allowing unlimited growth of the Yellowstone bison herd is not a realistic option because of potential problems with over-use of plant communities, negative impacts on other wildlife species, and land-use conflicts, especially on private property. Deciding on an appropriate population size for Yellowstone bison is difficult. Three frequently mentioned rationales for determining an optimum bison population size are: 1) minimizing egress of bison from YNP to reduce chances of transmitting brucellosis to livestock; 2) minimizing over-use of plant communities on seasonal ranges used by bison; and 3) minimizing loss of genetic diversity/fitness.

Results of studies noted in the Bison Management EIS (National Park Service 2000), the National Resource Council report on brucellosis (National Research Council 1998), and more recent data (Aune, personal communication; YNP, unpublished reports) indicate that some bison are likely to leave YNP in severe winters even when population size is <2,000. When the population reaches 2,000 -3,000, bison are likely to leave YNP in average to severe winters. When numbers exceed 3,000, bison are likely to emigrate in all but the mildest winters. If exposure of cattle to contact with bison were the only criterion determining optimum bison population size, "optimum" would be defined at some level below 2,000.

Several studies (Singer and Harter 1996, Dawes and Irby 2000, Olenicki, unpublished) have noted >50% utilization of standing biomass by bison and elk on seasonal ranges within YNP during years with overall bison populations of ~2,000 to 4,000. In conventional range management terms this would indicate an appropriate cap might exist somewhere in the range of 2,000 – 4,000 - if the herd is limited to habitat currently available and elk numbers remain in the range occurring during the period (1988 – 2001) when these studies were done.

Yellowstone bison do represent a population with a gene pool that has been isolated from other populations for more than 100 years, which has likely led to gene frequencies

different from other bison populations, and it does evidently have three genetic sub-populations (Dierschke Halbert 2003). A “minimum viable population size” may not be possible to define. The literature suggests an effective genetic population size of 50-500 might be required to maintain a constant level of genetic variation in a population. The Bison Management EIS (National Park Service 2000) identified 580 as the minimum population size necessary to preserve genetic diversity in YNP if bison are considered members of a single population. If genetically distinctive sub-populations persist (the latest data indicate that bison from different sub-units in the Park are mixing more frequently in winter but may not be mixing during the breeding season, Wallen personal communication), then the 580 minimum may be incorrect.

The Interagency Bison Management Plan (IBMP) calls for bison to be maintained at a target level of 3,000 animals (State of Montana and Yellowstone National Park 2000a, 2000b; National Parks Service 2000). This number of bison is generally consistent with the plant community and genetic diversity maintenance rationales, but is higher than the population that will minimize bison egress from YNP.

(A more thorough discussion is found in the “Bison Ecology in the Yellowstone Ecosystem” section of the Final EA.)

2. Potential impacts of hunting on the genetics of Yellowstone bison:

Many letters expressed concern about loss of unique gene combinations in Yellowstone bison that might occur as a result of hunting.

RESPONSE: *While bison in the Yellowstone herd may preserve some alleles unique to the Yellowstone area, introductions of bison from captive herds in western Montana and Texas in the early 20th century (Meagher 1973) preclude bison in the Yellowstone herd from being considered a “pure” geographic sub-population. After >100 years of isolation from other bison herds, however, the Yellowstone herd may have allele frequencies that differ from herds in other areas of the United States, even though bison from YNP served as the only founders for several other public herds in the United States.*

Arguments could be developed for several different optimum population sizes based on genetics. A large minimum might be desirable for a population that represented the only gene pool for a species, sub-species, or ecotype. The population in Yellowstone is not the only population of “wild” bison in North America nor is it a “pure” gene pool representing the Yellowstone area. Bison from western Montana and Texas were translocated into YNP early in the 20th century (Meagher 1973). Because YNP has served as a major source of stock for establishing new bison herds (Meagher 1973), alleles from bison in the Yellowstone herd will persist in other public herds, including at least two public herds that were founded solely from YNP bison and have never included bison from other areas (Dierschke Halbert 2003, Gogan, personal communication) even if bison were extirpated from the Yellowstone system.

A process that could selectively remove animals based on genetically linked characteristics, such as trophy hunting in which the largest adult males in a population are selected for harvest, could decrease the fitness of a population by disproportionately removing genetically superior animals. Experience with game species in the United States and Europe indicates that changing the genetics of populations through hunting requires high selectivity for specific genetically-linked characteristics and the harvest of a substantial proportion of the population that carries the genetically-linked characteristic over a number of generations (Ryman, et al. 1981, Fitzsimmons et al. 1995). If the proportion of animals removed from a breeding population each year is low or if selectivity of the removal processes (Capture by management agencies, collisions with vehicles, and predation by grizzly bears and wolves are the major mechanisms that remove bison from the Yellowstone herd at present. Hunting, if authorized, could become a mechanism in the future) is low to moderate, changes in genetic quality of a population are unlikely to occur.

Many bison herds in the United States have been degraded by introgression of genes from domestic cattle via hybridization. This has not occurred in the Yellowstone herd (Dierschke Halbert 2003). If the Yellowstone herd represented the only, or one of a few, public herds without cattle genes, a high minimum population size might be desirable to preserve a reservoir of “pure” bison. Fortunately, more than half of the public herds (state or federally managed bison) have no cattle genes or have removed bison hybrids (Derr, unpublished).

Yellowstone bison do represent a population with a gene pool that has been isolated from other populations for more than 100 years, which has likely led to gene frequencies different from other bison populations, and it does evidently have three genetic sub-populations (Dierschke Halbert 2003). A “minimum viable population size” may not be possible to define. The literature suggests an effective genetic population size of 50-500 might be required to maintain a constant level of genetic variation in a population. The Bison Management EIS (National Park Service 2000) identified 580 as the minimum population size necessary to preserve genetic diversity in YNP if bison are considered members of a single population. If genetically distinctive sub-populations persist (the latest data indicate that bison from different sub-units in the Park are mixing more frequently in winter but may not be mixing during the breeding season, Wallen personal communication), then the 580 minimum may be incorrect.

The Interagency Bison Management Plan (IBMP) calls for bison to be maintained at a target level of 3,000 animals (State of Montana and Yellowstone National Park 2000a, 2000b; National Parks Service 2000). This number of bison is generally consistent with the plant community and genetic diversity maintenance rationales, but is higher than the population that will minimize bison egress from YNP.

(A more thorough discussion is found in the “Bison Ecology in the Yellowstone Ecosystem” section of the Final EA.)

3. Humaneness/ethics of hunting bison:

A) Comments reflected a diversity of views on the relationship between bison and humans. Some respondents felt that any attempt to control bison, especially lethal control, was immoral. One letter noted that killing bison not only caused pain and suffering to bison, but the thought of bison suffering caused pain to the respondent.

RESPONSE: *Restriction of weapons to modern rifles and center-fire cartridges with bullets of an appropriate weight and hunter education (covering ethics, shot placement, carcass care, and hygiene during field dressing.) will minimize wounding loss and time between a bullet hit and death. “Fair chase” hunts will be insured by defining large hunting areas (including areas where bison can move to escape hunting pressure), by limiting numbers of hunters in the field, and by prohibiting hunting from vehicles. Although vehicles (including over-the-snow vehicles) may be used to access hunting areas and, where legal, can be used in retrieving carcasses, hunters will be required to pursue bison on foot and will not be allowed to shoot bison from public roads (the same restrictions that apply to other big game species in Montana). In the first years of the hunt, each hunter will have to make a personal decision on the ethics of shooting an animal that may not flee when approached by a human. Differing moral and ethical values are inherent in our society, although many oppose hunting, many also participate in the activity.*

B) A number of people who opposed killing bison from the Yellowstone herd did not object to killing animals but felt that bison in YNP had been persecuted since European explorers entered the area and now deserved more consideration than livestock. Many writers in this group believed that bison in YNP were the last wild bison in the United States, and some were convinced that these were the last bison anywhere. Most of the respondents in this group regarded YNP bison as much a cultural icon, important to both Indians and Euro-Americans, as a population in need of protection and insisted that YNP bison deserved more respect and tolerance than domestic ungulates, other native ungulates, or privately owned bison. Several commented that we are not treating bison the same way we treat elk, elk have brucellosis too and pose similar threats to the livestock industry as bison, yet we let elk roam freely.

RESPONSE: *Bison are the largest native ungulate in North America. They historically occupied open grasslands, savannah, and shrub steppe from the Northwest Territories of Canada to northern Mexico (Reynolds, et al. 1982). The majority of bison were located in the plains east of the Rockies at the time of European exploration of North America, but scattered populations occupied open plant communities as far west as eastern Washington and as far east as the Appalachians. Bison were nearly extirpated with European settlement of the Great Plains and the West.*

The population in Yellowstone is not the only population of “wild” bison in North America nor is it a “pure” gene pool representing the Yellowstone area. Bison from western Montana and Texas were translocated into YNP early in the 20th century

(Meagher 1973). Because YNP has served as a major source of stock for establishing new bison herds (Meagher 1973), alleles from bison in the Yellowstone herd will persist in other public herds, including at least two public herds that were founded solely from YNP bison and have never included bison from other areas (Dierschke Halbert 2003, Gogan, personal communication) even if bison were extirpated from the Yellowstone system. (see “Bison Ecology in the Yellowstone Ecosystem” section in the Final EA)

Allowing unlimited growth of the Yellowstone bison herd is not a realistic option because of potential problems with over-use of plant communities, negative impacts on other wildlife species, and land-use conflicts, especially on private property. Some of our most successful conservation and restoration efforts for large mammals in North America are based on managing wildlife on a landscape where people live, work and recreate. Hunting in the role of conservation, has provided most of the resources (social, political and economic) to make that happen with other large mammalian species. We are attempting to include bison in that mix so that long-term, free ranging populations of bison could be established in other geographic areas of the west.

The low seroprevalence rate of the northern Greater Yellowstone Area elk herds (<2~4%), despite occasional seasonal concentrations that result in densities similar to those found on winter feeding grounds, suggests that the risk of transmission from northern Greater Yellowstone Area elk to cattle is lower than that from bison. Therefore, elk in the Montana portion of the Greater Yellowstone Area are not considered to present enough of a risk of transmission to warrant risk management actions such as those being proposed for bison.

C) The injustices experienced by Native Americans at the hands of Euro-Americans and the extirpation of bison over most of their range in the United States were inextricably tied together in many peoples’ minds. Typical letters from this group of people demanded that bison be given freedom to roam outside YNP and that cattle be removed rather than bison if conflicts develop. Several letters suggested that excess bison should be given to Native Americans for establishing or increasing herds on reservations or that, if hunting had to be imposed, Native Americans should be given priority for harvest of bison in or near YNP.

RESPONSE: *Bison are regarded as a species central to Native American cultures of the Great Plains. The bison was so intimately woven into the economic and social lives of Native Americans that strategies for overcoming Native American resistance to Euro-American expansion into the Great Plains relied on elimination of bison for success. Tribal representatives have been allowed to accept meat and process carcasses of bison killed in brucellosis control operations, and they have requested live animals for transport to Native American lands. Requests for live bison have been denied because of the problems associated with moving animals potentially harboring Brucella to areas with brucellosis-free status (National Park Service 2000). (see “Social and Cultural Environment” section of the Final EA)*

The issue of giving bison more freedom to roam outside of YNP is beyond the scope of this EA. The IBMP (Interagency Bison Management Plan) agreed upon by the State of Montana and YNP (State of Montana and Yellowstone National Park 2000a, 2000b) relies on spatial-temporal separation of cattle and bison as a means of preventing transmission of brucellosis from bison to cattle. The plan includes provisions for adaptive management. As mechanisms that reduce brucellosis incidence in bison and/or potential contact between sero-positive bison and cattle are demonstrated to be effective, management agencies will increase tolerance of bison outside YNP. (see “Bison Population Status and Distribution” section in Final EA)

Preferences for ethnic, racial, or gender groups would be illegal under the equal opportunity laws under which MFWP operates. Without legislative authorization, special consideration of ethnic preferences cannot be considered in this EA. (see “Alternatives Considered but not Selected for Analysis” section of the Final EA under the “Preference systems for Native Americans” subsection)

D) Many respondents, including some who identified themselves as hunters, would not support recreational hunting by the public because they do not believe bison are behaviorally capable of providing a “fair chase” hunt. This group of respondents frequently compared bison hunting to shooting large, inanimate objects (sofas, Volkswagens, etc.). Some letters also suggested that introduction of public hunting was a thinly veiled plot to detract attention from activities of MDOL personnel.

Other respondents believed that bison could, given exposure to hunting and sufficient space to evade hunters, develop avoidance behavior as effective as hunter avoidance strategies used by elk and deer (*Odocoileus* spp.). Some respondents in this group believed sufficient acreage exists now to begin a hunt. Others noted that land purchases or removal of livestock from lands near YNP would have to be completed before a public hunt is permitted.

One group of respondents noted that bison should be treated as other native big game animals. This group considered bison hunting as ethical as hunting moose (*Alces alces*), another species that is not overly wary of humans. They indicated that hunting should be permitted if populations are not jeopardized, kills can be made humanely, and meat is utilized. Some letters from this group noted the value of meat from bison as a source of food and the cultural link to western history (and pre-history) provided by bison hunting. Several people noted that hunting was a more dignified way to treat bison than hazing, corralling, and shipment to slaughter. One respondent indicated that MFWP had a moral responsibility to allow hunters, who have funded a large share of costs of restoration of large mammals in Montana, to harvest bison now that bison numbers have recovered.

RESPONSE: *“Fair chase” hunts will be insured by defining large hunting areas (including areas where bison can move to escape hunting pressure), by limiting numbers of hunters in the field, and by prohibiting hunting from vehicles. Although vehicles (including over-the-snow vehicles) may be used to access hunting areas and, where legal,*

can be used in retrieving carcasses, hunters will be required to pursue bison on foot and will not be allowed to shoot bison from public roads (the same restrictions that apply to other big game species in Montana). Additionally hunting will not be allowed in areas of active bison trapping/hazing operations. In the first years of the hunt, each hunter will have to make a personal decision on the ethics of shooting an animal that may not flee when approached by a human. Based on experiences with bison hunts in the Northwest Territories, Canada, bison that have been hunted for two or more years become much more wary of humans (C. Gates, personal communication). (see impact analysis under Alternatives 2 and 3 in the “Humaneness/ethics” section in the Final EA)

Sufficient acreage currently exists to allow “Fair Chase” hunting. Please see Table 4. Potential areas available for public hunting of bison near the Yellowstone National Park boundary in Montana. Acreage (hectares in parentheses) for currently designated Zone 2 areas (where free-ranging bison are tolerated under specified seasonal restrictions) and total area where bison potentially could be hunted (Zone 2, wilderness areas where bison are tolerated. Acreages provided include: 21,019 in West Yellowstone Basin; 23,546 acres in Eagle/Bear Creek; and 98,870 acres on public lands in the Upper Gallatin drainage north to Taylor’s Fork (west of the Gallatin) and the Porcupine Wildlife Management Area (east of the Gallatin). In the future, as the IBMP is fully implemented in its final phase, significantly more tolerance and acreage will be available.

Hunting in the role of conservation, has provided most of the resources (social, political and economic) to make that happen with other large mammalian species. We are attempting to include bison in that mix so that long-term, as the disease threat is reduced, free ranging populations of bison could be allowed to establish in a larger geographic area.

E) A number of hunters opposed bison hunting because of the potential for anti-hunting groups to use films and photos of hunts to portray hunters in a negative fashion. The negative publicity generated by hunts in the 1980s was frequently mentioned – by hunters and as a threat from anti-hunters. Some respondents felt that primitive weapons (archery equipment and black powder rifles) should be allowed in the establishment of this hunt and that primitive weapons were human and efficient in their use. Some of these same respondents were offended by several statements in the Draft EA regarding their inefficiency and wounding probability.

RESPONSE: *YNP holds a special place in the hearts of Americans. Any activity in YNP is likely to attract more national attention than the same activity would attract on most other public or private lands. Bison management is no exception. Organizations and individuals opposed to bison management and/or bison control have protested hazing, capture, and shooting of bison by agency personnel since YNP, MDOL, and MFWP reached interagency management agreements that authorized invasive bison management techniques. Organizations opposed to hunting were able to use film and videos from public hunts conducted in Montana during the 1980s as effective fund raising tools and can be expected to try to raise money in the same way from hunts held today. If any public hunt is approved, opponents of hunting have threatened boycotts of YNP and*

businesses in gateway communities that depend on tourism in Yellowstone. Threats have not produced significant boycotts in the past.

Hunters participating in a bison hunt can expect to attract the attention of protestors. Limited numbers of permittees, a long season, large expanses of land open to hunting, and low levels of direct agency involvement with hunters should minimize confrontations between hunters and hunting opponents. Material sent to hunters will include information on how to avoid confrontations and how to handle confrontations if they occur. Agency enforcement personnel (MDOL, county sheriff's departments, MFWP, USFS, and YNP) should be briefed on hunter harassment laws and should adopt a policy of frequent, highly visible patrols in areas open to bison hunting. (from impact analysis under Alternatives 2 and 3 in subsection "Problems specifically associated with hunting bison near the boundary of Yellowstone National Park" in the Final EA)

Generally, primitive weapons are less efficient than modern firearms. However, when used properly, are as humane in making quick kills. State Statute 81-2-120 initially requires weapons be limited to firearms.

A major difference between the 1980s and today is, we had no management plan then and we do now. Although today's management plan (IBMP), with its adaptive features, may not be palatable to all, it is a major step forward in managing bison/livestock disease issues. Because of advances in the knowledge of brucella in the Yellowstone system, we now have multi agency tolerance for bison in defined areas of Montana and under certain conditions. These are the areas in which we are proposing to hunt bison. (for a thorough review of events leading up to development of the IBMP see "A Review of Bison Hunting in the Yellowstone Park Area" section in the Final EA)

4. Legal issues:

A) We addressed two issues relative to the legality of hunting bison in this EA: 1) the legal roles of MFWP and MDOL in bison management; and 2) the legality of relying on an environmental assessment (EA) rather than an environmental impact statement (EIS) for determining if a bison hunt is feasible and desirable. Some respondents questioned the legality of MFWP managing bison as a big game species when they have been classified by the Montana legislature as a "species in need of disease management" and MDOL has been designated as the agency in charge of bison. Other respondents believed that a hunt could not be held because MDOL had not been consulted in developing the bison hunt EA.

RESPONSE: *Statutes are already in place that will allow the MFWP Commission to authorize a hunt. Montana Statute 81-2-120 defines bison associated with Yellowstone National Park as "wild bison" and Statute 87-2-730 authorizes MFWP to design and implement a hunt in cooperation with MDOL. Eventual use of hunting as a management tool was discussed in the Final EIS on bison management (National Park Service 2000);*

therefore, YNP does not have to formally approve a public hunt in Montana. The public hunt would not replace the Interagency Plan as the primary regulatory mechanism for bison numbers and distribution in the Yellowstone population in the immediate future so hunting regulations would have to be configured so that agreed upon regulatory actions could take place in a timely manner. (For a thorough discussion see Chapter 4: Consequences of Alternatives, the preferred Alternative 3 section, in subsection “Legal and Economic Impacts for MFWP” in the Final EA)

MDOL was a cooperator during the both the scoping phase in developing the Draft EA and in preparation of the Final EA. The final hunt proposal is subject to the authorization of the Department of Livestock.

B) The second issue involved the adequacy of the environmental assessment process as a means of determining whether a public bison hunt in Montana should be held. Several organizations indicated they would sue to force the state of Montana to conduct a full EIS process.

RESPONSE: *MFWP believes this EA is adequate to meet the statutory requirements for deciding if a public hunt for wild bison in the Yellowstone herd is desirable and feasible. Specifically, MFWP statute 12.2.431 notes that:*

The agency shall consider the following criteria in determining the significance of each impact on the quality of the human environment:

(a) the severity, duration, geographic extent, and frequency of occurrence of the impact;

(b) the probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;

(c) growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;

(d) the quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources or values;

(e) the importance to the state and to society of each environmental resource or value that would be affected;

(f) any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and

(g) potential conflict with local, state, or federal laws, requirements, or formal plans.

(2) An impact may be adverse, beneficial, or both. If none of the adverse effects of the impact are significant, an EIS is not required. An EIS is required if an impact has a significant adverse effect, even if the agency believes that the effect on balance will be

beneficial. (History: Sec. 2-3—103, 2-4—201, MCA; , Sec. 2—3—104, 75—1—201, NCA; j 1988 MAR p. 2692, Eff. 12/23/88.)

The alternatives described in this EA are unlikely to cause impacts that would be severe enough, extensive enough, or frequent enough to necessitate an EIS. The extent of impacts relative to above conditions in Statute 12.2.431 are included in Chapter 4 (the “impacts” chapter) of this EA.

5. Impacts of proposed brucellosis vaccination program on edibility of meat:

Few respondents were concerned about brucellosis vaccination and its impact on edibility of bison meat. RB51 has a labeled 21-day withdrawal period (the time between vaccination and use of a vaccinated animal for human consumption). A few respondents suggested that some visible mark would be necessary to identify vaccinated animals if hunting is allowed while bison are being captured and vaccinated. Other respondents suggested the need for educational programs and/or research to identify risks of eating meat from vaccinated bison. Because MDOL plans to vaccinate only calves and yearlings, MDOL personnel suggested that the problem could be avoided by allowing only adult male bison to be hunted during periods and years when vaccinations are being administered.

RESPONSE: *Problems with edibility of meat due to vaccination programs conducted by MDOL and YNP are unlikely. If MDOL initiates a brucellosis vaccination program in the West Yellowstone area, bison will most likely be vaccinated only in spring, after the proposed bison season is closed. If bison are vaccinated while the hunting season is open, hunting may be limited to adult bulls (an age/gender class not scheduled for vaccination and identifiable by the average hunter). This restriction should minimize the possibility of hunters taking bison during the withdrawal period in the western hunting area. Permit holders can be individually informed of age/gender restrictions associated with vaccination.*

Exposure of hunters to bison vaccinated by YNP personnel near the northern boundary of YNP will be low if field vaccinations are limited to spring. YNP personnel will work only in the Park, and spring vaccinations should target bison that are likely to remain in the Park as they move towards summer range. If YNP personnel vaccinate animals in fall or winter, hunter exposure could be higher if recently vaccinated animals move out of YNP. If fall and winter vaccinations occur and YNP personnel elect not to use easily visible markings to identify vaccinated animals, hunters would be restricted to harvesting adult males (which will not be vaccinated and can be identified by the average hunter) in the northern hunting area. (see impact analysis under Alternatives 2 and 3 in the “Impacts of proposed brucellosis vaccination program on edibility of meat” section in the Final EA)

MFWP developed a list of conditions and restrictions that would apply to any alternative that included a public hunt. Condition 3 states that, “ Hunters will not be allowed to harvest bison that have been vaccinated for brucellosis within the mandated withdrawal

period (the time interval between vaccine administration and proven safety for meat consumption by humans). The withdrawal period for the vaccine most likely to be used, RB51, is 21 days.”

6. Logistics of hunting bison:

Both advocates and opponents of hunting made comments on how hunts should be organized. Comments by opponents of hunting generally included conditions that would essentially preclude a public hunt such as allowing hunting only by Native Americans (*see response to Issue 3C*) or by agency personnel who did not enjoy hunting, not opening hunting until all federal lands (presumably lands close to YNP but not specifically stated) are occupied by bison, delaying any hunt until guarantees that the costs of administering the hunt would be lower than the revenue generated by the hunt were in place, and allowing public hunting outside YNP only when Indians are allowed to hunt bison inside YNP. One respondent even suggested that “fair chase” conditions could only be met if bison had a chance to kill hunters.

Comments by proponents of hunting frequently included suggestions for avoiding the negative publicity that occurred during the bison hunts held in the 1980s. These suggestions included limiting hunting in areas where the public could view hunters, opening as much land as possible to hunting to avoid concentrating hunters, avoiding “firing line” situations associated with YNP boundaries, launching public relations or educational campaigns to give the public a more balanced view of the role of hunting in bison management, labeling the hunt as a “population control” or “problem harvest” operation rather than a “sport hunt,” requiring hunters to be competent (by certifying that hunters use appropriate weapons, are competent shots, can safely handle carcasses, and do not waste meat), setting regulations to avoid concentrating hunters in time or space, and strict enforcement of laws related to hunting, harassment of hunters, and trespass on private property.

Comments on season structure generally favored long seasons with permits issued via a lottery system and “reasonable” fees for residents. Several respondents suggested modeling the bison hunt on elk, bighorn sheep (*Ovis canadensis*), and mountain goat (*Oreamnos americanus*) hunts in Montana or on bison hunts conducted by wildlife agencies in Wyoming, Utah, and the Fort Belknap Indian Reservation. Hunting advocates were divided on weapons restrictions (some favoring only large caliber rifles; other promoting bows, black powder, and atlatls) and special consideration in permit lotteries (preferences for groups such as Native Americans or applicants who had applied and failed to be drawn; limiting permits to residents of Montana; allowing only one permit in-a-lifetime or 7 years exclusion from lottery following successfully harvesting a bison versus no preference or point system). Respondents who mentioned non-resident fees generally favored higher fees for non-residents than for residents. Respondent opinions varied on permit notification systems (specified time period drawn before hunting season versus call list when bison are available) and extent of agency supervision (agency

personnel required to accompany all hunters, guides only for out-of-state hunters, or minimal supervision by agency personnel). No respondents suggested specific numbers of permits to be issued, but some respondents implied they would support very liberal numbers while others appeared to be satisfied with allowing population control to remain in the hands of agency personnel. One e-mail suggested that agency personnel reduce numbers of bison to levels suitable for range available in YNP then allow hunters to maintain the population at this level by hunts within YNP.

RESPONSE: *YNP holds a special place in the hearts of Americans. Any activity in YNP is likely to attract more national attention than that same activity would attract on most other public or private lands. Bison management is no exception. Organizations and individuals opposed to bison management and/or bison control have protested hazing, capture, and shooting of bison by agency personnel since YNP, MDOL, and MFWP reached interagency management agreements that authorized invasive bison management techniques. Organizations opposed to hunting were able to use film and videos from public hunts conducted in Montana during the 1980s as effective fund raising tools and can be expected to try to raise money in the same way from hunts held today. If any public hunt is approved, opponents of hunting have threatened boycotts of YNP and businesses in gateway communities that depend on tourism in Yellowstone. Threats have not produced significant boycotts in the past.*

Hunters participating in a bison hunt can expect to attract the attention of protestors. Limited numbers of permittees, a long season, large expanses of land open to hunting, and low levels of direct agency involvement with hunters should minimize confrontations between hunters and hunting opponents. Material sent to hunters will include information on how to avoid confrontations and how to handle confrontations if they occur. Agency enforcement personnel (MDOL, county sheriff's departments, MFWP, USFS, and YNP) should be briefed on hunter harassment laws and should adopt a policy of frequent, highly visible patrols in areas open to bison hunting.

Bison hunting will generate income for MFWP from license fees and will generate costs associated with administering the hunt and with enforcing game regulations. With 25 hunters active for a few days each over a three-month season and potentially spread over tens of thousands of acres, income and expenses for MFWP should be low. Bison hunters may cause economic damage (stampeding bison through fences, careless shooting, etc.) or reduce damage (eliminate marauding bulls, force bison off private property, etc.) from bison to private property, but with 25 or fewer hunters, positive and negative impacts should be low. Costs of enforcement of trespass and anti-hunter harassment laws by state and federal agencies is probably the largest potential economic cost associated with a public bison hunt. Limited numbers of hunters and temporal and spatial spread of hunting should reduce opportunities for confrontations that would require enforcement action beyond that already incurred due to protests of agency management actions and should reduce the potential for organizing boycotts of Montana businesses.

Hunting would be expected to have minimal impacts on economic issues related to bison population size. Most bison that hunters would be able to legally harvest would be

subject to control (capture and slaughter or removal with firearms) by agency personnel carrying out actions mandated under the IBMP (State of Montana and Yellowstone National Park 2000b) if hunting did not occur. Hunting could influence economics by modifying bison behavior or distribution. A public hunt for bison could decrease the economic cost of bison if hunters kill or displace bison from private land. Fewer bison on private land would decrease contact between bison and cattle, reduce damage to fences and haystacks, and reduce the amount of forage on private lands consumed by bison. Hunters could also increase the economic cost of bison if, during the course of a hunt, they push bison onto private lands, through fences, or onto highways.

Recreational hunting, if instituted, would produce fees for licenses (\$75 for in-state and \$750 for out-of-state hunters, MCA 87-2-113 and 87-2-730) and local economic benefits when hunters purchase food, fuel, lodging, guiding services, and supplies. With the low number of permits likely to be issued, input to the local and state economies from bison hunting would be minor compared to overall economic activity in the region.

Economic benefits and costs in preferred Alternative include permit purchases (\$75 - \$3,900 for 1 to 25 permits, assuming ~10% are reserved for non-resident applicants plus \$10,000 if 2,000 people apply for a permit, the approximate annual number of applicants for bison permits in Wyoming over the past 3 years, and MFWP charges a \$3 application fee), hunter expenditures (\$522 - \$13,050 for food, fuel, and lodging for an average 3-day hunt based on a daily expenditure rate of \$174.50 which was calculated by adjusting an daily estimate of \$146.58 in 1996 dollars presented in the bison management EIS [National Park Service 2000, Table 54, p487] to 2004 dollars). A bison hunt could decrease (if hunters remove offending animals and force other animals to change their distribution and/or behavior) or increase (if hunters behave carelessly or drive bison through fences or onto highways) property damage, but any change from the “no hunt” state would be small.

Costs of a bison hunt under the preferred Alternative 3 would include administration of the drawing and enforcement activities required to control anti-hunters and hunters. The costs of administration would be low because drawing procedures are well established and advertising, printing, and other costs associated with 25 or fewer permits would add little to existing hunting permit administration. Monitoring hunter compliance with laws and regulations would also require little if any extra money. Wardens, park rangers, state and county law enforcement personnel, and Forest Service enforcement personnel patrol all the potential bison hunting areas to control violations by hunters seeking other big game species and non-hunters (including non-hunting recreationists and residents). The only substantial increase in costs would be associated with monitoring/controlling opponents of bison hunting, if they decide to interfere with hunters, and lost business that would occur if organizations opposed to bison hunting mount a successful campaign to boycott Montana. A boycott threatened when Montana conducted public bison hunts in the 1980s, when hundreds of bison were killed in a single year, did not produce detectable changes in tourist expenditure in the Yellowstone area (National Park Service 2000). (see Chapter 4: Consequences of Alternatives, the preferred Alternative 3 section, in subsection “Economic Impacts” in the Final EA)

The preferred alternative would allow a few hunters a relatively long season in which to pursue bison with as few restrictions on areas open to hunting as are practical. Given conditions specified in Statute 87-2-730, the interpretation of legislative intent by MFWP personnel mandated to explore the feasibility of a public hunt, limitations imposed by bison ecology, climate, vegetation, and administrative boundaries in the Yellowstone area, and the realities of administering a hunt, MFWP developed a list of conditions and restrictions that would apply to any alternative that included a public hunt:

- 1. Hunting will be restricted to individuals with permits issued via a drawing process similar to that employed for other special permits issued by MFWP. Hunts will not be administered via a call-up list.*
- 2. Fee structure and application fee (\$3) will follow MCA 87-2-113: \$75 for residents, \$750 for non-residents).*
- 3. Hunters will not be allowed to harvest bison that have been vaccinated for brucellosis within the mandated withdrawal period (the time interval between vaccine administration and proven safety for meat consumption by humans). The withdrawal period for the vaccine most likely to be used, RB51, is 21 days.*
- 4. Initially, weapons will be limited to firearms (required by Statute 81-2-120). Firearms will be restricted to those capable of propelling bullets with sufficient force to produce a quick kill (a center-fire, 150 grain or larger bullet, will result in at least a 270 caliber, or larger, firearm).*
- 5. Hunting will be allowed on public land and on private land with landowner permission.*
- 6. No bison hunting will be allowed within 100 yards of major highways in areas open to bison hunting to protect public safety and minimize traffic obstructions. This would initially include segments of Highways 20, 191, and 287 on the western boundary of Yellowstone National Park (YNP) and Highway 89 near the northern boundary of YNP. Hunting on National Forest lands will follow restrictions in USFS order 36 CFR 261.10 (d) (firearm discharges are prohibited within 150 yards of a residence, building, campsite, developed recreation site, or occupied area or across a forest service road or body of water).*
- 7. All hunters will be advised of restrictions and special problems that might be encountered in a bison hunt near YNP in application announcements.*
- 8. Applicants who draw permits will be provided with information on the most effective ways to kill bison and on carcass handling procedures that will minimize meat spoilage and brucellosis infections in humans.*

9. *If a preference system is created, hunters that apply and do not draw permits will be given preference in the same manner that preference points are awarded in other special permit hunts.*
10. *Initially, bison hunting will be allowed only between November 15 and February 15.*
11. *Bison permits will be valid in both areas open to hunting near West Yellowstone (on the western boundary of YNP) and areas near Gardiner (on the northern boundary of YNP).*
12. *Agencies involved in bison or land management in areas of Montana with wild bison will be informed or, in the case of MDOL (a legislatively mandated partner in bison management in Montana), must authorize changes in hunting regulations.*
13. *Permit numbers, hunting district boundaries, and season structure can be modified by the MFWP Commission (i.e. If bison numbers in the Yellowstone herd drop below 2,500, permit number can be reduced. When bison are tolerated outside YNP in larger areas and in greater portions of the year, more permits can be issued.).*

In general, a public hunt for bison associated with the Yellowstone herd would be limited to areas where hazing (under the Interagency Bison Management Plan) is not occurring during a specified hunting season, to permit holders drawn by lottery, would involve a minimum of supervision by agency personnel, would mirror administrative procedures used in other permit hunts in Montana, and would rely on educating hunters to avoid problems with brucellosis, public safety, trespass, and damage to public natural resources. (see Chapter 3 Alternatives Including the Preferred Alternative in the “Conditions and restrictions common to all alternatives that include public hunting” section in the Final EA)

7. Public safety:

Only one respondent noted that bison pose a threat to human safety outside YNP. No respondents mentioned the two best-documented threats bison pose to human safety, bison – vehicle collisions and bison aggression towards tourists in YNP. A few opponents of hunting noted that hunters would pose a threat to other recreationists using areas open to bison hunting. Few advocates of hunting mentioned public safety issues, but when they did, they did not consider them serious, given the low number of permits expected to be issued, or believed that problems were easily controllable (require hunter orange for hunters and/or require hunters to complete an orientation course that includes safety issues).

RESPONSE: *Hunters will be required to adhere to shooting regulations and safety precautions required in all other big game hunts with modern firearms in Montana (no shooting in areas where people or livestock may be endangered, daylight hunting only,*

hunter orange required, etc. – specific requirements are given in published hunting regulations). No bison hunting will be allowed within 100 yards of major highways in areas open to bison hunting to protect public safety and minimize traffic obstructions. This would initially include segments of Highways 20, 191, and 287 on the western boundary of Yellowstone National Park (YNP) and Highway 89 near the northern boundary of YNP. Hunting on National Forest lands will follow restrictions in USFS order 36 CFR 261.10 (d) (firearm discharges are prohibited within 150 yards of a residence, building, campsite, developed recreation site, or occupied area or across a forest service road or body of water). (see impact analysis under Alternatives 2 and 3 in the “Public Safety” section in the Final EA)

During all of Montana’s various hunting seasons, other recreationists are present. These seasons include late season elk hunts, winter mountain lion and trapping seasons, fall big game seasons (both archery and general gun seasons). Conflicts with other recreationists are minimal in all those seasons. We would expect no snowmobile conflicts in the Eagle/Bear Creek area near Gardiner because the Federal Lands within that area are closed to snowmobiling. We would expect very little conflict in the West Yellowstone area due to prohibitions of hunting from a snowmobile and the predictable trail and area usage that occurs by recreational snowmobilers and the low numbers of permits being offered. (see Chapter 4: Consequences of Alternatives, the preferred Alternative 3 section, in subsection “Cultural/Social Environment” in the Final EA)

8. Exposure of hunters to brucellosis:

Few respondents (including hunters) were worried about the risk of contracting brucellosis. The ones that mentioned this subject suggested taking precautions while handling carcasses, education of hunters in carcass handling, or research into risks of contracting brucellosis.

RESPONSE: *Precautions that hunters should take when handling carcasses potentially infected with Brucella bacteria will be included with hunting regulations for bison and in educational material provided to permit recipients. (see impact analysis under Alternatives 2 and 3 in the “Risk of transmitting brucellosis to hunters” section in the Final EA)*

The human form of brucellosis, undulant fever, is difficult to treat and was once a common disease of humans in the United States. Pasteurization of milk eliminated undulant fever as a common human disease, but humans can contract brucellosis by handling infected tissues or exudates (most likely by transferring bacteria from hands to mouth). However, humans have handled hundreds of infected bison and thousands of infected elk carcasses over many years in the Yellowstone ecosystem with only one subsequent report of undulant fever.

9. Property damage (by hunters or by bison during the hunt):

The issue of property damage was not a major concern for most respondents, but several letters and attendees at public meetings did raise this issue. Speakers at the West Yellowstone meeting who owned property in the West Yellowstone area were concerned with damage to property from hunters and/or MDOL personnel. The perceptions of damage in written responses were tightly linked to the feelings of the respondent about hunting bison. Opponents of hunting either did not consider property damage by bison serious or did not believe that hunting would change bison distribution or behavior enough to reduce damage. A few suggested that property owners either institute management changes to minimize damage or learn to tolerate damage before resorting to harassing bison or allowing bison to be killed. Hunters believed that hunting would reduce property damage by bison and that hunters were unlikely to cause much property damage. Several hunting proponents mentioned the need to obtain permission to hunt on private land. No respondents mentioned the damage caused by bison-vehicle collisions, the greatest documented economic loss attributable directly to bison (National Park Service 2000).

RESPONSE: *Bison may consume forage and hay intended for livestock, destroy fencing, and injure cattle and horses. Although these losses are difficult to accurately quantify, the forage consumed by an individual bison would be roughly equivalent to that eaten by a cow. Fence replacement is difficult to price because the labor involved is usually done by the ranch owner. Losses due to injuries or death of livestock could be estimated by charges for veterinarian services and/or replacement value for livestock.*

Bison may also damage vehicles and non-agricultural property and can be dangerous to humans. Of the 143 incidents of bison nuisance/damage recorded in 1991-1993 (National Park Service 2000), ~90 were not directly related to agricultural operations. Between 1991 and 1997, 50 bison – vehicle collisions were reported in YNP and in Montana near the YNP boundary. Monetary damage was estimated for only six of the collisions (5 in YNP and 1 in Montana for a total of \$18,800 or \$3,100 per collision). (see “Economic Environment” section in Final EA)

With no more than 25 hunters per year, bison hunting should not create a measurable risk of property damage. The Gallatin National Forest has over 3 million recreation days per year, including ~200,000 hunter-days in which hunters seek species other than bison (National Park Service 2000). Bison hunters would add no more than a few 100 (more likely <100) recreation days. (see impact analysis under Alternatives 2 and 3 in the “Property Damage” section in the Final EA)

The preferred alternative was not designed as a damage hunt. However, it is possible that a private landowner who is having a problem could contact a hunter to remove the animal. This would be on a highly variable, case-by-case basis.

10. Impacts of bison hunters or activities associated with hunting on other species (including threatened and endangered species):

As with property damage, perceptions of impacts of bison hunting on other animal species in the Yellowstone ecosystem varied with the view of respondents towards hunting. Hunting advocates either believed impacts were minimal or positive (providing gut piles for wolves and bears; reducing bison herbivory on plant communities essential to other animal species). Opponents of public hunting feared that hunters would remove potential prey items for carnivores or winter-killed carcasses for scavengers from the ecosystem and that the presence of hunters could disturb threatened and endangered species. One respondent noted that grizzly bears could be drawn to bison kills as they are to elk kills. This creates a potentially dangerous situation for both hunters and bears.

***RESPONSE:** Hunters are unlikely to confuse bison with other species so kills of non-target wildlife should be very low. Disturbances of common, rare, or threatened animal or plant species by bison hunters will be small compared to potential disturbances by the thousands of hunters, anglers, hikers, skiers, and snowmobilers that currently use areas proposed for bison hunting. Entrails from bison killed by hunters will provide a small increase in food for carnivores and scavengers but may also expose carnivores and scavengers to brucellosis. Infections, if they occur, will likely be limited to a few animals that actually feed on *Brucella*-infected tissue, and non-ungulates that contract brucellosis are unlikely to spread the disease (Dobson and Meagher 1996). The potential for producing grizzly bear attractants is minimal because of the timing of the season (most bears have hibernated by mid November and will not become active until March or later). Areas near bald eagle nests will be closed to bison hunters as they are to other human activities when eagles are present. (see impact analysis under Alternatives 2 and 3 in the “Impacts of bison hunting on other animal species” section in the Final EA)*

Under the preferred alternative, the small number of bison that would potentially be harvested by hunters (as compared to management actions taken under the IBMP) will be minimal and not be the limiting factor on overall population size and therefore would not affect overall prey availability for large carnivores.

11. Impacts of a recreational bison hunt on activities mandated under the Interagency Bison Management Plan:

MDOL personnel contacted in the course of preparing this EA did not believe that limited public hunting would be a serious problem for agency personnel involved in bison control. Some respondents noted that hunting could help MDOL efforts by reducing the number of bison that needed to be captured, hazed, or vaccinated and by reducing presence of *Brucella*-infected animals available to infect livestock. One respondent believed that hunting would encourage communication and cooperation among public

agencies because hunters would be involved in the process and, therefore, more inclined to support MDOL activities.

Other respondents saw public hunting as incompatible with MDOL management mandates. Some believed that public hunting would be precluded under the current management plan (State of Montana and Yellowstone National Park 2000a, 2002b) because the plan did not specifically authorize public hunting. Others felt that public hunting would interfere with elimination of brucellosis by exposing animals with natural immunity to brucellosis and vaccinated animals to mortality from hunting, thus reducing the proportion of YNP bison that are not threats to the livestock industry, and by encouraging brucellosis-positive animals to enter new areas (where they might encounter livestock) to avoid hunters.

RESPONSE: *Hazing, trapping, and other activities mandated in the IBMP (State of Montana and Yellowstone National Park 2000a, 2000b) for MDOL, MFWP, and YNP personnel will continue. Hunters will not be used to directly replace management actions by agencies; agency personnel will not have access to a list of bison hunters that can be called to provide lethal management action; and hunters will have to defer to agency personnel if agency activities interfere with their attempts to approach bison. The risk of exposure of cattle to tissue infected with Brucella in viscera from harvested bison will be virtually zero because the bison season will end more than three months before cattle are allowed into areas open to bison hunting. (see impact analysis under Alternatives 2 and 3 in the “Impacts of a recreational bison hunt on activities mandated under the Interagency Bison Management Plan” section in the Final EA)*

The development of the IBMP went a long way to improve communication between the agencies and those communications are on going. Having hunters involved will add another citizen’s voice in dealing with bison/disease/livestock issues, and they may be inclined to support joint agency activities and to also get involved with conservation and restoration of the species in other geographic areas.

Statutes are already in place that will allow the MFWP Commission to authorize a hunt. Montana Statute 81-2-120 defines bison associated with Yellowstone National Park as “wild bison” and Statute 87-2-730 authorizes MFWP to design and implement a hunt in consultation with MDOL. Eventual use of hunting as a management tool was discussed in the Final EIS on bison management (National Park Service 2000); therefore, YNP does not have to formally approve a public hunt in Montana. The public hunt would not replace the Interagency Plan as the primary regulatory mechanism for bison numbers and distribution in the Yellowstone population in the immediate future so hunting regulations would have to be configured so that agreed upon regulatory actions could take place in a timely manner. Hunting will be limited to areas where hazing (under the Interagency Bison Management Plan) is not occurring during a specified hunting season. (For a thorough discussion see Chapter 4: Consequences of Alternatives, the preferred Alternative 3 section, in subsection “Legal and Economic Impacts for MFWP” in the Final EA)

Also, see response to Issue 6.

12. Problems specifically associated with hunting bison near the boundary of Yellowstone National Park:

YNP occupies a special place in the culture of the United States. As such, some activities that would produce virtually no response from the public if carried out on private land, state land, or land managed by other federal agencies, can create a public outcry if Yellowstone is involved. Respondents noted both positive and negative consequences that bison hunting near Yellowstone could generate. Negative impacts predicted by respondents included declines in tourism from people opposed to hunting, people opposed to hunting a cultural icon such as bison, and people opposed to hunting YNP bison specifically. Hunting opponents frequently mentioned opposition to a public hunt near Yellowstone by recognized pro-hunting groups during hearings before the Montana legislature. These groups feared that the reputations of hunters, Yellowstone National Park, and Montana would be damaged by a poorly conceived bison hunt near YNP. Other fears, such as hunting reducing visibility of bison to Yellowstone visitors and hunting eliminating the last wild herd in America, while not likely to be valid, were based on sincere concern for Yellowstone.

Proponents of hunting perceived a bison hunt as a chance to demonstrate local values to people in other regions of the USA. They did not believe that a limited bison hunt would precipitate a tourist boycott (or did not care if it did) and believed that hunter activity would generate welcome off-season income to businesses in towns near where bison would be hunted (Gardiner and West Yellowstone).

RESPONSE: *YNP holds a special place in the hearts of Americans. Any activity in YNP is likely to provoke more national attention than the same activity would provoke on most other public or private lands. Bison management is no exception. Organizations and individuals opposed to bison management and/or bison control have protested hazing, capture, and shooting of bison by agency personnel since YNP, MDOL, and MFWP reached interagency management agreements that authorized invasive bison management techniques. Organizations opposed to hunting were able to use film and videos from public hunts conducted in Montana during the 1980s as effective fund raising tools and can be expected to try to raise money in the same way from hunts held today. If any public hunt is approved, opponents of hunting have threatened boycotts of YNP and businesses in gateway communities that depend on tourism in Yellowstone. Threats have not produced significant boycotts in the past.*

Hunters participating in a bison hunt can expect to attract the attention of protestors. Limited numbers of permittees, a long season, large expanses of land open to hunting, and low levels of direct agency involvement with hunters should minimize confrontations between hunters and hunting opponents. Material sent to hunters will include information on how to avoid confrontations and how to handle confrontations if they occur. Agency enforcement personnel (MDOL, county sheriff's departments, MFWP, USFS, and YNP) should be briefed on hunter harassment laws and should adopt a policy of frequent, highly visible patrols in areas open to bison hunting. (from impact analysis under

Alternatives 2 and 3 in subsection “Problems specifically associated with hunting bison near the boundary of Yellowstone National Park” in the Final EA)

This proposal is not an attempt to dismiss the values held by those opposed. The preferred alternative is designed to provide hunter opportunity for the species in a way that is compatible with the IBMP that incorporates “Fair Chase” hunting activities and complies with applicable State Statutes and SB 395.

Also see the “Social and Cultural Environment” section of the Final EA.

13. Economics and social issues not associated with YNP:

Several respondents offered comments, pro and con, relative to a public bison hunt that were not specifically linked to YNP. Opponents of hunting threatened an economic boycott of the whole state of Montana if hunting were allowed. They also predicted that a bison hunt would be detrimental to the image of hunting in general and to the reputation of the state of Montana. One opponent noted that the costs of the hunt were grossly under-estimated and that revenue from tags could never cover costs. Another opponent protested taxpayer money being used to kill bison rather than protect them.

Proponents of hunting noted that Wyoming receives ~\$2 for each dollar it spends on bison hunting and that Montana could generate a similar profit. They also noted that hunting is a major economic boost to many small towns in Montana. One pro-hunting respondent proposed donating excess bison meat from hunters to food banks and Indian reservations (*see response to Issue 3C*).

RESPONSE: *Bison hunting will generate income for MFWP from license fees and will generate costs associated with administering the hunt and with enforcing game regulations. With 25 hunters active for a few days each over a three-month season and potentially spread over tens of thousands of acres, income and expenses for MFWP should be low. Bison hunters may cause economic damage (stampeding bison through fences, careless shooting, etc.) or reduce damage (eliminate marauding bulls, force bison off private property, etc.) from bison to private property, but with 25 or fewer hunters, positive and negative impacts should be low. Costs of enforcement of trespass and anti-hunter harassment laws by state and federal agencies are probably the largest potential economic costs associated with a public bison hunt. Limited numbers of hunters and temporal and spatial spread of hunting should reduce opportunities for confrontations that would require enforcement action beyond that already incurred due to protests of agency management actions and should reduce the potential for organizing boycotts of Montana businesses. (see impact analysis under Alternatives 2 and 3 in subsection “Economic and social issues not directly associated with YNP” in the Final EA)*

Economic benefits and costs in Alternative 3 are similar to those in Alternative 2. Economic benefits include permit purchases (\$75 - \$3,900 for 1 to 25 permits, assuming

~10% are reserved for non-resident applicants plus \$10,000 if 2,000 people apply for a permit, the approximate annual number of applicants for bison permits in Wyoming over the past 3 years, and MFWP charges a \$3 application fee), hunter expenditures (\$522 - \$13,050 for food, fuel, and lodging for an average 3-day hunt based on a daily expenditure rate of \$174.50 which was calculated by adjusting an daily estimate of \$146.58 in 1996 dollars presented in the bison management EIS [National Park Service 2000, Table 54, p487] to 2004 dollars). A bison hunt could decrease (if hunters remove offending animals and force other animals to change their distribution and/or behavior) or increase (if hunters behave carelessly or drive bison through fences or onto highways) property damage, but any change from the “no hunt” state would be small.

Costs of a bison hunt under Alternative 3 would be similar to those under Alternative 2. Costs would include administration of the drawing and enforcement activities required to control anti-hunters and hunters. The costs of administration would be low because drawing procedures are well established and advertising, printing, and other costs associated with 25 or fewer permits would add little to existing hunting permit administration. Monitoring hunter compliance with laws and regulations would also require little if any extra money. Wardens, park rangers, state and county law enforcement personnel, and Forest Service enforcement personnel patrol all the potential bison hunting areas to control violations by hunters seeking other big game species and non-hunters (including non-hunting recreationists and residents). The only substantial increase in costs would be associated with monitoring/controlling opponents of bison hunting, if they decide to interfere with hunters, and lost business that would occur if organizations opposed to bison hunting mount a successful campaign to boycott Montana. (National Park Service 2000). (For a thorough discussion see Chapter 4: Consequences of Alternatives, the preferred Alternative 3 section, in subsections “Economic Impacts” and “Legal and Economic Impacts for MFWP” in the Final EA)

14. “Citizens Alternative”:

The citizen’s alternative was advanced in 13 letters (formatted as petitions) that contained 69 signatures. The proposal included 4 conditions that would have to be met before a public hunt for bison was authorized:

- 1) MFWP must be the sole agency responsible for bison management in Montana.
- 2) Bison must be allowed unfettered access to public lands outside YNP year-round.
- 3) Additional habitat (beyond that identified in the IBMP) must be designated for bison.
- 4) MFWP should cease participating in the Interagency Bison Management Plan.

RESPONSE: *This alternative included 4 conditions that would have to be met before a public hunt for bison was authorized (see page 15-16 of Final EA). All four conditions in the proposed “Citizens Alternative” are in direct conflict with the Final EIS for the Interagency Bison Management Plan (IBMP). Further, they are outside of the legal framework laid out in State Statute 87-2-113, authorization for management of wild bison for disease control, and Statute 87-2-730, the law that authorized MFWP to determine if a public hunt for wild bison from the Yellowstone population was feasible and desirable. They are also in direct conflict with SB 395, the Montana Senate Bill that led to 87-2-730.*

While we do appreciate the concerns expressed by the people who signed petitions supporting the citizen’s alternative, MFWP cannot meet any of the 4 conditions without legislative action in Montana and/or changes in cooperative agreements with other federal and state agencies. Because these actions cannot be completed in the time period under consideration in this EA, the citizen’s alternative would, in effect, require MFWP to adopt the “no action” alternative at this time. We, therefore, have not evaluated potential impacts associated with the citizen’s proposal.

Final Decision

Based on the analysis in the EA and the comments received it is our decision to authorize a hunt of bison as described under the preferred alternative with some modifications. The modifications focus on what areas are suitable for hunting bison. Hunting will be limited to areas where hazing is not occurring under the Interagency Bison Management Plan (IBMP). The annual season-setting process will be used to identify the specific area that is suitable for hunting and the appropriate number of permits in that defined area. Those decisions will be made by the Montana Fish, Wildlife and Parks Commission.

Fair chase hunting of bison is required under state law (MCA 87-2-730). Based on our environmental review and associated public comment we concluded we could not provide for a fair chase hunt of bison in areas where bison were directly hazed. The IBMP identifies areas where bison are not directly hazed (e.g. Eagle Creek). Those may be the first areas we consider open for bison hunting. We may identify additional areas in the future that could be added for open bison hunting, while not compromising the fundamental intent of the IBMP.

Based on the analysis in the EA and the applicable laws, regulations and policies, we have determined that this action will not have a significant effect on the natural or human environment. Therefore, the EA is the appropriate level of review and an environmental impact statement will not be prepared. It is our decision to implement the preferred alternative as amended in this decision.

By notification of this decision the Draft EA is hereby made the Final EA as modified in this decision. The Final EA may be viewed at or obtained from Montana Fish, Wildlife and Parks at 1400 S 19th Avenue, Bozeman, MT 59718. This decision will be presented before the Montana Fish, Wildlife and Parks Commission at their meeting scheduled for October 7, 2004.

M. Jeff Hagener
Director
Montana Fish, Wildlife and Parks

Pursuant to Mont. Code Ann. §81-2-120(1)(c), the Department of Livestock, through its Board of Livestock, and the State Veterinarian authorize a limited public bison hunt as described in the final Environmental Assessment and Decision Notice authored and adopted by DFWP. Further, the Department of Livestock incorporated as its own the analysis of the impacts to the human environment in the final Environmental Assessment done by DFWP in compliance with the requirements of MEPA pursuant to Mont. Code Ann. §75-1-101, et seq.

Marc Bridges
Executive Officer
Department of Livestock

Dr. Thomas Linfield, DVM
State Veterinarian